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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,652	04/27/2001	Andrew Dodd	6114	8516

7590 02/24/2004
Arlene J Powers
Samuels Gauthier & Stevens
225 Franklin Street Suite 3300
Boston, MA 02110

EXAMINER

ROSE, ROBERT A

ART UNIT	PAPER NUMBER
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3723

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DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/762,652

Applicant(s)
Dodd et al

Examiner
Robert Rose

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3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 19, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-30 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 1-16 have been canceled.
2. Claims 17-30 are presented for examination.
3. Claims 22, and 27-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 22, line 2 and claim 27, line 2 it is unclear whether the recited expression "is improved from 0.13um to around 0.07 um" is intended to recite a range of improvement for the final product after treatment, or whether the "0.13um" is intended to refer to the surface roughness prior to any treatment. Further, in claims 22 and 27 it is not clear what parameter is being measured.
4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 17-19, and 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Hashimoto or Wood. Both Hashimoto and Wood(British No. 227277) disclose a method of producing a surface finish on bearing surfaces within the recited range by immersion grinding. Processing time is dependent upon the particular workpiece but is given in Hashimoto as 45 minutes for one example(column 6, lines 30-34). The compressive strength increase would have been an expected result of performing the method of either Hashimoto or Wood. The desired

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range of compressive strength imparted to the bearing surface would have been an obvious matter of design choice depending upon the conditions under which the bearing is to be used.

6. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Hashimoto or Wood, and further in view of Ohno. Ohno disclose a conventional apparatus for finishing workpieces comprising a rotary abrasive media receptacle and a rotary holder for preventing workpieces from contacting each other during immersion machining. To finish the bearing surfaces in a conventional rotary immersion receptacle with rotation of the workpieces within the media, to prevent contact between workpieces would have been obvious in view of Ohno.

7. Applicant's arguments filed November 19, 2003 have been fully considered but they are not persuasive. Applicant has indicated in his remarks that it is not the surface roughness achieved, but rather the time period of exposure which results confers the particular range of compressive stress to the work surface. However, Applicant's limitation of "the hard particle abrasion being performed for between 10 minutes and 1 hour" is deemed to be disclosed in the art of record (Note Hashimoto column 6, lines 30-34). Further, with regard to the final product, applicant's recitation of the compressive stress and fatigue life are results rather than limitations of the method steps, and must therefore follow as a result of performing the steps recited. If a result other than this is attainable by performing these method steps, then the steps have not set forth distinctly the subject matter which applicant regards as his invention. The desired

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compressive stress range and fatigue life are regarded as obvious matters of design choice depending upon the particular application intended for the final product.

8. Any inquiry concerning this communication should be directed to Robert Rose at telephone number (703) 308-1360.

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February 20, 2004.



ROBERT A. ROSE
PRIMARY EXAMINER
ART UNIT 323